

REMARKS/ARGUMENTS

In this response, the Applicant has amended claims 1, 5–6, 8–10, 13–14, 18–19, 21–23, 26–28, and 30–31, canceled claims 4, 7, 17, and 20, without prejudice or disclaimer, and added new claims 32–38, to particularly point out certain novel features of the present invention. The Applicant respectfully submits that the aforementioned changes do not add new matter, and that the amended and new claims are supported by the previously filed specification.

Drawings

The Examiner has objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5) because the elements “100a,” “100b,” and “100c,” are not mentioned in the description. The Applicant has amended the second last paragraph of the specification to include these variations of pommels.

Claim Objections

The Examiner has objected to claims 5–13, 18–26, 30, and 31, under 37 C.F.R. 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. Reconsideration thereof is requested in light of the following.

The claims have been appropriately amended to avoid improper multiple dependent claims. Favorable consideration is requested.

Rejection Under 35 U.S.C. §112

The Examiner has rejected claims 1–4, 14–17, and 27–29, under 35 U.S.C. §112, second paragraph. Reconsideration thereof is requested in light of the following.

The antecedent basis insufficiency in claims 1 and 14 has been corrected. The grammatical error in claim 28 has been corrected, and the definite article now precedes “person” to indicate that it is the same person to which reference is made throughout the

claims. Claims 4 and 17 have been cancelled. The rest of the current claims have been amended where appropriate to provide antecedent bases.

Accordingly, the Examiner is requested to withdraw these rejections.

Rejection Under 35 U.S.C. §102

The Examiner has rejected claims 1–4 and 14–17 under 35 U.S.C. §102(b) as anticipated by Tholkes (U. S. Patent, No. 5,054,852). Reconsideration thereof is requested in light of the following.

Claims 1 and 14 have been amended to recite that the second support surface is disposed substantially forwardly of the first support surface in a second plane angled downwardly in relation to the first plane and is adapted to support the person's thighs. Moreover, the second support surface is characterized as having a forward facing edge and a front-to-back length extending a sufficient extent from just forward of the person's sit bones to having the forward facing edge located just behind the person's knees, so that the second support surface extends under and supports the person's thighs. The open-angle seat of the present invention is to provide independent support surfaces for the sit bones and the thighs of a person, yet allow for the thighs to drop into an open-angle position. Accordingly, the front-to-back extent of the second support surface has to extend from just forward of the sit bones to just behind the knees to support the thighs—i.e., as seen from Figure 7 of the instant application, the front-to-back extent of the second support surface is from a point slightly forward of the sit bones to just behind the knees (see, for example, page 11, lines 12–28, of the instant application). If the front-to-back extent was not long enough, such support for the thighs would not be available.

Tholkes teaches a seat support that includes “a contoured cushion which supports the buttocks, when seated, and the lower-back, when standing.” (col. 2, lines 33–35). Applicant submits that the purpose of the contoured cushion, or chamfered edge, is to allow room for the calf muscles when standing (see Fig. 6 in Tholkes). Such

a chamfered edge eliminates what would otherwise be a sharp corner from pressing into the calf muscle when the seat pivots from a horizontal position to a vertical position. Allowing for a chamfered edge for this purpose can be appreciated by looking at Figure 1 of applicant's instant application, wherein a person is shown standing and the contour of the back of the legs is clearly visible around reference characters A and B (note that these reference characters do not refer to the back of the legs, but conveniently mark these regions in this Figure for purposes of this discussion). Particularly, the calf muscles can be seen in the contour of the back of the legs towards the top of the extent identified by reference character B. If one were to superimpose Figure 1 of applicant's application with Figure 6 of Tholkes, it would become clear that without the chamfered edge the front edge of the cushion of Tholkes would push against the calf muscles of the standing person; the chamfered edge removes this interference. For this purpose, the chamfered edge only has to extend a short distance. This can be appreciated, again referencing Figure 1 of the instant application, where it can clearly be seen that any surface to accommodate the calf muscles (shown near the top of the extent identified by reference character B) does not have to be as long as a surface needed to provide independent support for the thighs of a person (identified by reference character A) as in applicant's instant application.

Applicant submits that the seat of Tholkes, when in the seated position, supports the buttocks and the thighs along a single support surface only, i.e., is a typical chair well known in the industry. Moreover, applicant submits that the front-to-back extent of the chamfered edge of Tholkes is too short to provide independent support for the thighs, which is not surprising since its intended purpose is to remove interference with the calf muscles when the person is standing as discussed above. In particular, when the seat in Tholkes is horizontal, the chamfered edge is similar to what is commonly known in the seating industry as a "waterfall" edge, which is found on many seats. Its function is to break the upper front corner of the seat to prevent a sharp edge from pressing painfully into the back of the upper leg, which can cut off blood circulation. Applicant is well aware of a "waterfall" edge and knows that it does not provide sufficient front-to-back extent to support the thighs in an open angle at the hips (i.e., the second

support surface has to extent from just forward of the person's sit bones to having the forward facing edge located just behind the person's knees).

Accordingly, Tholkes does not teach nor suggest the claimed seat or chair, inasmuch as Tholkes does not teach that the second support surface is disposed substantially forwardly of the first support surface in a second plane angled downwardly in relation to the first plane and is adapted to support the person's thighs by having a forward facing edge and a front-to-back length extending a sufficient extent from just forward of the person's sit bones to having the forward facing edge located just behind the person's knees, so that the second support surface extends under and supports the person's thighs.

The claimed structure allows for independent support of the thighs, which is not only different from Tholkes, but provides significant and unanticipated advantages thereover. Therefore, independent claims 1 and 14, and the remaining claims that depend therefrom, are neither taught nor shown in Tholkes. Accordingly, favorable consideration of these claims is solicited.

Rejection Under 35 U.S.C. §103(a)

The Examiner has rejected claims 27-29 under 35 U.S.C. §103(a) as unpatentable over Tholkes. Reconsideration thereof is requested in light of the following.

Claim 27 has been amended to state the second support surface is disposed substantially forwardly of the first support surface in a second plane angled downwardly in relation to the first plane and is adapted to support the person's thighs. Moreover, the second support surface is characterized as having a forward facing edge and a front-to-back length extending a sufficient extent from just forward of the person's sit bones to having the forward facing edge located just behind the person's knees, so that the second support surface extends under and supports the person's thighs.

Tholkes does not show nor teach a chair having that geometry. As mentioned above, Tholkes teaches a seat support that includes "a contoured cushion which supports the buttocks, when seated, and the lower-back, when standing." (col. 2, lines 33-35). In contrast, the second support surface of the instant invention is adapted to support the thighs, which explains its relatively long front-to-back length. Such a feature, or a method for making same, is neither taught nor suggested in Tholkes.

As previously mentioned, the Tholkes patent does not deal with the proximate problem of providing independent support for the thighs. As mentioned, Tholkes is directed, in part, to providing "a contoured cushion which supports the buttocks, when seated, and the lower-back, when standing." Since Tholkes is not concerned with the same proximate problem as the present invention there can be no *prima facie* case of obviousness of modifying Tholkes to provide the invention. In this regard see *In re Pye*, 148 USPQ 426, 429 (CCPA 1966) wherein the court held:

"While, as an abstract proposition, it might be possible to select certain statements from Fikentscher a mechanically combined and with Touey to arrive at appellants' claimed combination, we find absolutely no basis for making such a combination. Neither reference is directed to the problem solved by appellants' invention, namely developing a cleaning composition for the skin having improved lubricity characteristics. In our view only appellants' specification suggests any reason for combining the teachings of the prior art but use of such suggestion is, of course, improper under the mandate of 35 U.S.C. 103. *In re Schaffer*, 43 CCPA 758, 229 F.2d 476, 108 USPQ 326." (emphasis added).

Applicant submits that there is no motivation to modify Tholkes to provide the invention. Tholkes nowhere recognizes the advantages of providing independent support to the thighs according to the invention. Without a suggestion of these advantages Tholkes cannot be obviously modified.

See *In re Gordon*, 221 USPQ 1125, 1127 (Federal Circuit 1984):

"We are persuaded that the board erred in its conclusion of prima facie obviousness... The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification."

In applicants submission there is not even the most remote suggestion in any way, shape or form of modifying the Tholkes apparatus for the purposes of the present invention, namely to provide independent support for the thighs. Moreover, Tholkes does not disclose the second support surface is disposed substantially forwardly of the first support surface in a second plane angled downwardly in relation to the first plane and is adapted to support the person's thighs, with the second support surface characterized as having a forward facing edge and a front-to-back length extending a sufficient extent from just forward of the person's sit bones to having the forward facing edge located just behind the person's knees, so that the second support surface extends under and supports the person's thighs, and a method of constructing a chair utilizing certain measurements from a person and arranging the support surfaces, including the second support surface as described and claimed in the instant application.

In objecting to claims under 35 U.S.C. 103, reasons why one of ordinary skill in the art would have been motivated to arrive at the claimed invention must be provided. To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from applicant's disclosure. See for example, *Uniroyal, Inc. vs. Rudkin-Wyle Corp.* 837 F2d, 7, USPQ, 2d 1434 (Federal Circuit 1988). Rejections based on §103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. It is submitted that without the benefit of applicant's disclosure, a skilled artisan would not be motivated by the prior art of record to modify Tholkes in any way to provide the method as now claimed in the instant application. Moreover, applicant submits that its invention, as now

claimed, is not only different from Tholkes, but provides substantial advantages thereover that are unobvious from the art of record.

Accordingly, favorable consideration of claims 27–29 is requested.

New Claims

The Applicant has added new claims 32–38, particularly pointing out certain features of the present invention.

New independent claim 32 is based on previous claim 29 and recites a method of constructing a chair for a specific person. The method includes the step of obtaining a measurement of the length of a hand of the specific person, as measured from the wrist to the end of the middle finger, as an appropriate front-to-back length of the second support surface. Such a length of the hand was found to often be appropriate for providing the support of the thighs taught in the present invention. A measurement of the hand as described in this claim is not taught nor suggested in Tholkes to obtain a front-to-back length of the second support surface that is capable of providing augmented thigh support. Accordingly, favorable consideration of these claims is solicited.

Supplemental Information Disclosure Statement

Accompanying this response, applicant is providing a Supplemental Information Disclosure Statement, referencing a German study by Jurgens that applicant has become aware of. The study is in the German language and is for “The Distribution of Body Weight on Seating Surface and Backrest as a Problem of Industrial Anthropology.” Applicant submits that most of the study relates to the issue of distribution of body weight, however, the discussion does reference two chairs (Chair A and Chair B) for comparison purposes which are shown in Figure 3. The portions of the study that discuss these chairs have been labeled B, C, D, and E, and a certified translation into English of those portions is provided for the Examiner’s consideration.

Applicant submits that Chair B is a perch, similar to what has been described in the application and to perches previously provided to the Examiner in the references supplied with the initial Information Disclosure Statement, filed March 22, 2002. In particular, the text of portion B clearly describes that the horizontal portion of the seat is about 1/3 of the seating surface. Applicant submits that this is insufficient to distribute a downward load of a person's trunk across the person's buttocks to provide support for the person's sit bones. As a result, the load is shifted to the feet, which creates a "perch."


This, of course, is different from what is described and claimed in applicant's instant application; the first support surface in the instant application is substantially longer than shown in Chair B in order to provide full support under the buttocks and avoid shifting the load to the feet. Perching is confirmed in Jurgén by the 1:3 ratio of the "first support surface" to the extent of the seating surface, and is what applicant avoids with the geometry of the seat and chair of its invention as described and claimed.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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